

WHAT IS CLAIMED IS:

1. An interface controller for interfacing a data acquisition device to at least one host device, the interface controller comprising:

5 a microcomputer for translating received data from the data acquisition device and outputting a host device type signal; and

a switching circuit for electrically coupling the microcomputer to the at least one host device based on the host device type signal and transmitting the received data to the host device.

10 2. The interface controller as in claim 1, further comprising a memory for storing a plurality of data translation modules for translating the received data, each of the plurality of data translation modules corresponding to a type of the at least one host device.

15 3. The interface controller as in claim 1, wherein the switching circuit comprises a plurality of switches for coupling host-specific outputs from the microcomputer to an output connector of the interface controller.

20 4. The interface controller as in claim 3, further comprising a multiplexer for receiving the host device type signal from the microcomputer and outputting a plurality of switching signals into the plurality of switches.

5. The interface controller as in claim 1, further comprising a plurality of drivers for driving output signals to voltage levels acceptable by the at least one host device.

6. The interface controller as in claim 1, further comprising a decoder for receiving
5 input data from a scan engine of the data acquisition device and decoding the received input data according to a predetermined symbology.

7. A data acquisition device comprising:

a scan engine for optically acquiring encoded data from a substrate;

10 a decoder for receiving input data from the scan engine and decoding the received input data according to a predetermined symbology; and

an interface controller for interfacing the data acquisition device to at least one host device based on a type of the at least one host device.

8. The data acquisition device as in claim 7, wherein the interface controller comprises:

15 a microcomputer for translating received data from the decoder and outputting a host device type signal; and

a switching circuit for electrically coupling the microcomputer to the at least one host device based on the host device type signal and transmitting the received data to the
20 host device.

9. The data acquisition device as in claim 8, further comprising a memory for storing a plurality of data translation modules for translating the received data, each of the plurality of data translation modules corresponding to a type of the at least one host device.

5 10. The data acquisition device as in claim 8, wherein the switching circuit comprises a plurality of switches for coupling host-specific outputs from the microcomputer to an output connector of the interface controller.

10 11. The data acquisition device as in claim 10, further comprising a multiplexer for receiving the host device type signal from the microcomputer and outputting a plurality of switching signals into the plurality of switches.

12. The data acquisition device as in claim 8, further comprising a plurality of drivers for driving output signals to voltage levels acceptable by the at least one host device.

15 13. A data acquisition system comprising:
a data acquisition device for acquiring data from a substrate;
at least one host device for receiving and processing the acquired data; and
an interface controller for interfacing the data acquisition device to at least one host
20 device based on a type of the at least one host device.

14. The data acquisition system as in claim 13, wherein the data acquisition device and the interface controller are an integral device.

15. The data acquisition system as in claim 13, wherein the interface controller comprises:

a microcomputer for translating acquired data from the data acquisition device and outputting a host device type signal; and

5 a switching circuit for electrically coupling the microcomputer to the at least one host device based on the host device type signal and transmitting the received data to the host device.

16. The data acquisition system as in claim 15, wherein the interface controller further
10 comprises a memory for storing a plurality of data translation modules for translating the acquired data, each of the plurality of data translation modules corresponding to a type of the at least one host device.

17. The data acquisition system as in claim 15, wherein the switching circuit comprises a
15 plurality of switches for coupling host-specific outputs from the microcomputer to an output connector of the interface controller.

18. The data acquisition device as in claim 17, wherein the switching circuit further
20 comprises a multiplexer for receiving the host device type signal from the microcomputer and outputting a plurality of switching signals into the plurality of switches.

19. The data acquisition device as in claim 15, wherein the interface controller further comprises a plurality of drivers for driving output signals to voltage levels acceptable by the at least one host device.

5 20. A method for interfacing a data acquisition device to at least one host device, the method comprising the steps of:

coupling the data acquisition device to the at least one host device with an interface controller;

determining a type of the at least one host device; and

10 configuring the interface controller based on the type of the at least one host device.

21. The method as in claim 20, further comprising loading a data translation module for translating data acquired by the data acquisition device to a format of the at least one host device.

15 22. The method as in claim 20, wherein the determining step comprises inputting the type of the at least one host device via the data acquisition device.

23. The method as in claim 22, wherein the inputting step comprises optically scanning
20 the type of the at least one host device.

24. The method as in claim 20, where the determining step comprises performing an autodiscriminate routine to detect if a host device is connected.

25. The method as in claim 20, wherein the configuring step comprises electrically coupling host-specific outputs of the interface controller to the at least one host device.